CLAIMS

I claim:

1. A method for enabling a user of a wireless terminal to control a ubiquitous device, comprising:

receiving information concerning a location of the wireless terminal; and

transmitting for display on the wireless terminal data associated with an access point within whose operating range the wireless terminal is located, wherein the data includes a map representative of an area associated with the access point and a user-selectable object representative of a ubiquitous device from the area for display on the map.

2. The method of claim 1, wherein the wireless terminal belongs to the group consisting of a laptop computer, a personal data assistant (PDA) and a mobile phone.

3. The method of claim 1, wherein receiving information concerning a location of the wireless terminal includes receiving an access point identifier.

4. The method of claim 1, wherein the user-selectable object representative of the ubiquitous device is transmitted as a map overlay.

5. The method of claim 1, wherein the area is co-extensive with the operating range of the access point.

6. The method of claim 1, wherein transmitting data associated with an access point includes transmitting map boundary information together with symbols and labels representative of items in the area represented by the map.

7. The method of claim 1, wherein the user-selectable object representing a ubiquitous device for display on the map is an icon.

8. The method of claim 1, wherein the user-selectable object is associated with an address of a ubiquitous device.

9. The method of claim 1, further comprising:

receiving a request for information concerning areas associated with other access points;

transmitting for display on the wireless terminal information concerning the other areas; and

receiving a request for map data pertaining to one of the other areas.

10. The method of claim 1, further comprising:

receiving a user identifier; and

determining the ubiquitous devices that the user is authorized to access based on the user identifier.

11. The method of claim 10, wherein the user-selectable object representative of the ubiquitous device is transmitted only if the user identifier indicates that the user is authorized to access the ubiquitous device.

12. The method of claim 1, wherein the ubiquitous device is located in a home environment.

13. The method of claim 1, wherein the operating range of the access point is a room of a building.

14. The method of claim 1, wherein the access point is a wireless LAN access point capable of communicating at least via one of a WLAN, HIPERLAN and Bluetooth connection.

15. A method for enabling a user of a wireless terminal to control a ubiquitous device, comprising:

receiving information concerning an access point within whose operating range the wireless terminal is located; and

transmitting for display on the wireless terminal a list of ubiquitous devices associated with the access point.

16. The method of claim 15 wherein the received information is an access point identifier.

17. A method for enabling a user of a wireless terminal located within the operating range of a first access point to control a ubiquitous device associated with a second access point, comprising:

receiving a request for an identification of ubiquitous devices associated with the second access point; and

transmitting an identification of a ubiquitous device associated with the second access point for display on the wireless terminal.

18. The method of claim 17, wherein transmitting an identification of a ubiquitous device includes transmitting a map representative of an area associated with the second access point with an object representative of the ubiquitous device depicted thereon.

19. The method of claim 17, wherein transmitting an identification of a ubiquitous device includes transmitting a list of ubiquitous devices.

20. A method for enabling a user of a wireless terminal to control a ubiquitous device, comprising:

receiving information concerning a location of the wireless terminal;

transmitting for display on the wireless terminal data associated with an access point within whose operating range the wireless terminal is located, wherein the data includes a map representative of an area associated with the access point and a user-selectable object representative of a ubiquitous device from the area for display on the map;

receiving an indication that a user of the terminal has selected the object representative of the ubiquitous device; and

transmitting information for use by the wireless terminal in allowing the user to control the ubiquitous device from the wireless terminal.

21. The method of claim 20, further comprising:

receiving a control command transmitted by the wireless terminal for controlling the ubiquitous device.

22. The method of claim 21, wherein the information transmitted for use by the wireless terminal to permit a user to control the ubiquitous device includes a graphical representation of a control panel with user-selectable buttons depicted thereon and the control command is generated by user selection of one of the buttons.

23. A method for enabling a user of a wireless terminal located within an operating range of a first access point to control a ubiquitous device associated with a second access point, comprising:

receiving a request for an identification of ubiquitous devices associated with the second access point;

transmitting an identification of ubiquitous devices associated with the second access point for display on the wireless terminal;

receiving an indication that a user of the wireless terminal has selected one of the ubiquitous devices; and

transmitting information for use by the wireless terminal in permitting the user to control the selected device from the wireless terminal.

24. The method of claim 23, wherein transmitting an identification of ubiquitous devices includes transmitting a map representative of an area associated with the access point with an object representative of a ubiquitous device depicted thereon.

25. The method of claim 23, wherein transmitting an identification of ubiquitous devices includes transmitting a list of ubiquitous devices.

26. A method for a user of a wireless terminal to control a ubiquitous device, comprising:

receiving data associated with an access point within whose operating range the wireless terminal is located, wherein the data includes a map representative of an area associated with the access point and a user-selectable object representative of a ubiquitous device located in the area; and

displaying the map with the user-selectable object depicted on the map.

27. The method of claim 26, wherein the wireless terminal belongs to the group consisting of a laptop computer, a personal data assistant (PDA) and a mobile phone.

28. The method of claim 26, wherein the user-selectable object representative of the ubiquitous device is a map overlay.

29. The method of claim 26, wherein the user-selectable object representing a ubiquitous device for display on the map is an icon.

30. The method of claim 26, wherein the user-selectable object is associated with an address of a ubiquitous device.

31. The method of claim 26, wherein the user-selectable object is depicted on the map in a manner consistent with its physical location in the area represented by the map.

32. The method of claim 26, wherein receiving data associated with an access point includes receiving map boundaries.

33. The method of claim 26, wherein receiving data associated with an access point includes receiving symbols and labels representative of items in the area represented by the map.

34. The method of claim 26, further comprising:

requesting information concerning areas associated with other access points;

receiving and displaying information concerning the other areas; and

requesting map data pertaining to one of the other areas.

35. The method of claim 26, further comprising:

transmitting a user identifier.

36. The method of claim 35, wherein the user identifier is an identifier associated with a SIM card.

37. The method of claim 36, wherein the user identifier is a password.

38. A method for a user of a wireless terminal to control a ubiquitous device, comprising:

receiving a list of ubiquitous devices associated with an access point within whose operating range the wireless terminal is located; and

displaying the list to the user.

39. A method for a user of a wireless terminal located within an operating range of a first access point to control a ubiquitous device associated with a second access point, comprising:

receiving an identification of a ubiquitous device associated with the second access point; and

displaying the identification of the ubiquitous device on a display of the wireless terminal.

40. The method of claim 39, wherein receiving and displaying an identification of a ubiquitous device includes receiving and displaying a map of an area associated with the second access point with an object representative of a ubiquitous device depicted thereon.

41. The method of claim 39, wherein receiving an identification of a ubiquitous device includes receiving and displaying a list of ubiquitous devices on the wireless terminal.

42. A method for a user of a wireless terminal to control a ubiquitous device, comprising:

receiving data associated with an access point within whose operating range the wireless terminal is located, wherein the data includes a map representative of an area associated with the access point and a user-selectable object representative of a ubiquitous device from the area for display on the map;

displaying the map with the user-selectable object depicted on the map;

selecting the object representative of the ubiquitous device;

receiving control information for use in controlling the ubiquitous device from the wireless terminal; and

generating a control command to control an operation of the ubiquitous device.

43. The method of claim 42, further comprising:

transmitting the control command to the ubiquitous device.

44. The method of claim 43, wherein the control command is transmitted to the ubiquitous device via an access point.

45. The method of claim 43, wherein the control command is transmitted directly to the ubiquitous device via a short range wireless connection.

46. The method of claim 42, wherein the received control information includes a graphical representation of a control panel with user-selectable buttons depicted thereon and the control command is generated by user selection of one of the buttons.

47. A method for a user of a wireless terminal located within an operating range of a first access point to control a ubiquitous device associated with a second access point, comprising:

transmitting a request for an identification of ubiquitous devices associated with the second access point;

receiving and displaying an identification of a ubiquitous device associated with the second access point;

selecting one of the ubiquitous devices from the display;

receiving control information for use in controlling the selected device; and

transmitting a control command to control an operation of the ubiquitous device while the user terminal is located in the first access point coverage area.

48. The method of claim 47, wherein the request is automatically generated by the wireless terminal.

49. The method of claim 47, wherein the request is initiated by the user of the wireless terminal.

50. The method of claim 49, wherein the user initiates the request by depressing a service access key.

51. The method of claim 47, wherein receiving and displaying an identification of a ubiquitous device includes receiving and displaying a map representative of an area associated with the access point with an object representative of a ubiquitous device depicted on the map.

52. The method of claim 47, wherein receiving and displaying an identification of a ubiquitous device includes receiving and displaying a list of ubiquitous devices.

53. A system for enabling a user of a wireless terminal to control a ubiquitous device, comprising:

a memory device storing a program; and

a processor in communication with the memory device, the processor operative with the program to:

receive information concerning a location of the wireless terminal; and

transmit for display on the wireless terminal data associated with an access point within whose operating range the wireless terminal is located, wherein the data includes a map representative of an area associated with the access point and a user-selectable object representing a ubiquitous device from the area for display on the map.

54. The system of claim 53, wherein the wireless terminal belongs to the group consisting of a laptop computer, a personal data assistant (PDA) and a mobile phone.

55. The system of claim 53, wherein the information received concerning a location of the wireless terminal includes an access point identifier.

56. The system of claim 53, wherein the user-selectable object representative of the ubiquitous device is transmitted as a map overlay.

57. The system of claim 53, wherein the access point is a wireless LAN access point operable to communicate at least via one of a WLAN, HIPERLAN and Bluetooth connection.

58. The system of claim 53, wherein the area is co-extensive with the operating range of the access point.

59. The system of claim 53, wherein the data transmitted for display on the wireless terminal includes map boundary information together with symbols and labels representative of items in the area represented by the map.

60. The system of claim 53, wherein the user-selectable object is an icon.

61. The system of claim 53, wherein the user-selectable object is associated with an address of a ubiquitous device.

62. The system of claim 53, wherein the processor is further operative with the program to:

receive a request for information concerning areas associated with other access points;

transmit for display on the wireless terminal information concerning the other areas; and

receive a request for map data pertaining to one of the other areas.

63. The system of claim 53, wherein the processor is further operative with the program to:

receive a user identifier; and

determine the ubiquitous devices that the user is authorized to access based on the user identifier.

64. The system of claim 53, wherein the user-selectable object representative of the ubiquitous device is transmitted only if the user identifier indicates that the user is authorized to access the ubiquitous device.

65. The system of claim 53, wherein the ubiquitous device is located in a home environment.

66. The system of claim 53, wherein the operating range of the access point is a room of a building.

67. A system for enabling a user of a wireless terminal to control a ubiquitous device, comprising:

a memory device storing a program; and

a processor in communication with the memory device, the processor operative with the program to:

receive information concerning an access point within whose operating range the wireless terminal is located; and

transmit for display on the wireless terminal a list of ubiquitous devices associated with the access point.

68. The system of claim 67 wherein the received information is an access point identifier.

69. A system for enabling a user of a wireless terminal located within the operating range of a first access point to control a ubiquitous device associated with a second access point, comprising:

a memory device storing a program; and a processor in communication with the memory device, the processor operative with the program to:

receive a request from the wireless terminal for an identification of ubiquitous devices associated with the second access point; and

transmit an identification of a ubiquitous device associated with the second LAN access point for display on the wireless terminal.

70. The system of claim 69, wherein the identification of a ubiquitous device includes a map of an area associated with the second LAN access point with an object representative of the ubiquitous device depicted thereon.

71. The system of claim 69, wherein the identification of a ubiquitous device includes a list of ubiquitous devices.

72. A system for enabling a user of a wireless terminal to control a ubiquitous device, comprising:

a memory device storing a program; and

a processor in communication with the memory device, the processor operative with the program to:

receive information concerning a location of the wireless terminal;

transmit for display on the wireless terminal data associated with an access point within whose operating range the wireless terminal is located, wherein the data includes a map representative of an area associated with the access point and a user-selectable object representing a ubiquitous device from the area for display on the map;

receive an indication that a user of the terminal has selected the object representative of the ubiquitous device; and

transmit information for use by the wireless terminal in allowing the user to control the ubiquitous device from the wireless terminal.

73. The system of claim 72, wherein the processor is further operative with the program to:

receive a control command transmitted by the wireless terminal for controlling the ubiquitous device.

74. The system of claim 73, wherein the information transmitted for use by the wireless terminal to permit a user to control the ubiquitous device includes a graphical representation of a control panel with user-selectable buttons depicted thereon and the control command is generated by user selection of one of the buttons.

75. A system for enabling a user of a wireless terminal located within an operating range of a first access point to control a ubiquitous device associated with a second access point, comprising:

a memory device storing a program; and

a processor in communication with the memory device, the processor operative with the program to:

receive a request for an identification of ubiquitous devices associated with the second access point;

transmit an identification of ubiquitous devices associated with the second access point for display on the wireless terminal;

receive an indication that a user of the wireless terminal has selected one of the ubiquitous devices; and

transmit information for use by the wireless terminal in permitting the user to control the selected device from the wireless terminal.

76. The system of claim 75, wherein the identification of ubiquitous devices includes a map representative of an area associated with the access point with an object representative of a ubiquitous device depicted thereon.

77. The system of claim 75, wherein the identification of ubiquitous devices includes a list of ubiquitous devices.

78. A system for a user of a wireless terminal to control a ubiquitous device, comprising:

a memory device storing a program; and

a processor in communication with the memory device, the processor operative with the program to:

receive data associated with an access point within whose operating range the wireless terminal is located, wherein the data includes a map representative of an area associated with the access point and a user-selectable object representing a ubiquitous device located in the area; and

display the map with the user-selectable object depicted on the map.

79. The system of claim 78, wherein the wireless terminal belongs to the group consisting of a laptop computer, a personal data assistant (PDA) and a mobile phone.

80. The system of claim 78, wherein the user-selectable object representative of the ubiquitous device is received as a map overlay.

81. The system of claim 78, wherein the user-selectable object is an icon.

82. The system of claim 78, wherein the user-selectable object is associated with an address of a ubiquitous device.

83. The system of claim 78, wherein the user-selectable object is depicted on the map in a manner consistent with its physical location in the associated area.

84. The system of claim 78, wherein the area is smaller than the operating range of the access point.

85. The system of claim 78, wherein the data received includes map boundary information together with symbols and labels representative of items in the area represented by the map.

86. The system of claim 78, wherein the processor is further operative with the program to:

request information concerning areas associated with other access points;

receive and display information concerning the other; and

request map data pertaining to one of the other areas.

87. The system of claim 78, wherein the processor is further operative with the program to:

transmit a user identifier.

88. The system of claim 87, wherein the user identifier is an identifier associated with a SIM card.

89. The system of claim 87, wherein the user identifier is a password.

90. A system for a user of a wireless terminal to control a ubiquitous device, comprising:

a memory device storing a program; and

a processor in communication with the memory device, the processor operative with the program to:

receive a list of ubiquitous devices associated with an access point within whose operating range the wireless terminal is located; and

display the list to the user.

91. A system for a user of a wireless terminal located within an operating range of a first access point to control a ubiquitous device associated with a second access point, comprising:

a memory device storing a program; and

a processor in communication with the memory device, the processor operative with the program to:

receive an identification of a ubiquitous device associated with the second access point; and

display the identification of the ubiquitous device on a display of the wireless terminal.

92. The system of claim 91, wherein the identification of a ubiquitous device includes a map representative of an area associated with the second access point with an object representative of a ubiquitous device depicted thereon.

93. The system of claim 91, wherein the identification of the ubiquitous device includes a list of ubiquitous devices.

94. A system for a user of a wireless terminal to control a ubiquitous device, comprising:

a memory device storing a program; and

a processor in communication with the memory device, the processor operative with the program to:

receive data associated with an access point within whose operating range the wireless terminal is located, wherein the data includes a map representative of an area associated with the access point and a user-selectable object representative of a ubiquitous device from the area for display on the map;

display the map with the user-selectable object depicted on the map;

select the object representative of the ubiquitous device;

receive control information for use in controlling the ubiquitous device from the wireless terminal; and

generate a control command to control an operation of the ubiquitous device.

95. The system of claim 94, wherein the processor is further operative with the program to:

transmit the control command to the ubiquitous device.

96. The system of claim 95, wherein the control command is transmitted to the ubiquitous device via an access point.

97. The system of claim 95, wherein the control command is transmitted directly to the ubiquitous device via a short range wireless connection.

98. The system of claim 95, wherein the control information includes a graphical representation of a control panel with user-selectable buttons depicted thereon and the control command is generated by user selection of one of the buttons.

99. A system for a user of a wireless terminal located within the operating range of a first access point to control a ubiquitous device associated with a second access point, comprising:

a memory device storing a program; and

a processor in communication with the memory device, the processor operative with the program to:

transmit a request for an identification of ubiquitous devices associated with the second access point;

receive and display an identification of a ubiquitous device associated with the second access point;

select the ubiquitous device from the display;

receive control information for use in controlling the selected device; and

transmit a control command to control an operation of the ubiquitous device while the user terminal is located in the first access point coverage area.

100. The system of claim 99, wherein the request is automatically generated by the wireless terminal.

101. The system of claim 99, wherein the request is initiated by the user of the wireless terminal.

102. The system of claim 101, wherein the user initiates the request by depressing a service access key.

103. The system of claim 99, wherein the identification of a ubiquitous device includes a map representative of an area associated with the access point with an object representative of a ubiquitous device depicted on the map.

104. The system of claim 99, wherein the identification of a ubiquitous device includes a list of ubiquitous devices.